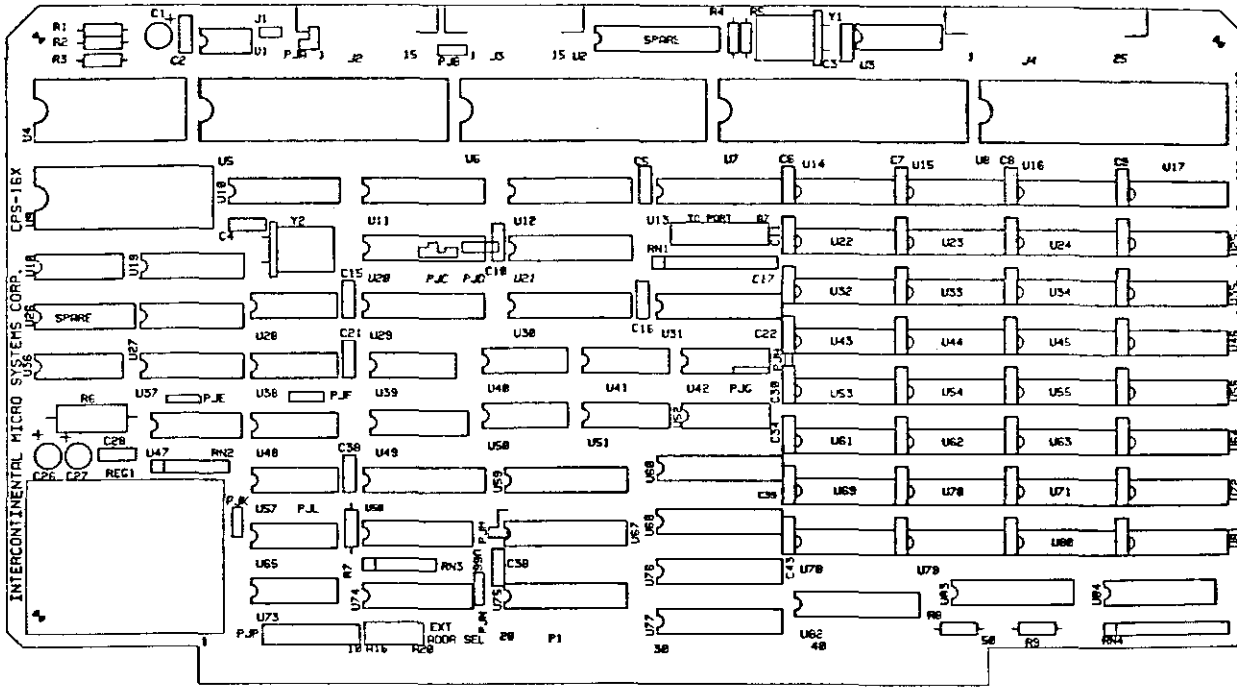
3.3K ohm	Resistor 10-pin SIP	RN1, RN4	2
4.7K ohm	Resistor 6-pin SIP	RN2, RN3	2
10 ohm	Resistor 2 watt	R6	1
33 ohm	Resistor 1/4 watt	R8, R9	2
1.2K ohm	Resistor 1/4 watt	R1,R4,R5,R7	4
4.7K ohm	Resistor 1/4 watt	R3	1
20K ohm	Resistor 1/4 watt	R2	1
REG 78H05	+5V Regulator	REG1	1
5 pico-farad	Capacitor, Mica	C4	1
0.1 micro-farad	Capacitor, Tant	C5-25,28-46	40
0.01 micro-farad	Capacitor, Ceramic	C2, C3	2
10 micro-farad	Capacitor, Tant	C1, C27	2
22 micro-farad	Capacitor, Tant	C26	1
24 MHz	Crystal	Y2	1
2.4576 MHz	Crystal	Y1	1
2x8 jumper array			1
Cnctr Rt Angle 1x2		J1	1
2-640463-3 8PNSCKT	8-pin socket	U1	1
2-640357-3 14PNSCKT	14-pin socket	U3,18,28,36,38-42 47,48,50-52,57,65,73	17
2-640358-3 16PNSCKT	16-pin socket	U14-17,19,22-25,27, 32-35,37,43-46,49, 53-56,61-64,69-72,78-81	36
2-640359-3 18PNSCKT	18-pin socket	U10,66,74,84	4
2-640464-3 20PNSCKT	20-pin socket	U11-13,20,21,29-31 58-60,67,68,75-77,82,83	18
2-640361-3 24PNSCKT	24-pin socket	U4	1
2-640362-3 28PNSCKT	28-pin socket	U9	1
2-640379-3 40PNSCKT	40-pin socket	U5-8	4
HEATSINK 6104B	Base w/ Hat		1
IDH-16LP-SR3-TG	16-pin male rt. angle cnctr	J2,J3	2
IDH-26LP-SR3-TG	26-pin male rt. angle cnctr	J4	1
#6 NUT			2
#6 WASHER			8
6/32X1/2 SCREW			2
CPS-16X Blank Card			1

74LS00	QUAD NAND GATE	U40,52	2
74LS02	QUAD NOR GATE	U39	1
74LS04	HEX INVERTER	U3,41	2
74LS10	TRI NAND GATE	U48	1
74LS32	QUAD OR GATE	U38	1
74LS74A	DUAL D FLIP/FLOP	U36,47,73	3
74LS109	DUAL J-K FLIP/FLOP	U27	1
74LS138	PRIORITY ENCODER	U19	1
74LS139	PRIORITY ENCODER	U49	1
74LS164	SERIAL-PARALLEL REG	U57	1
74LS175	QUAD REGISTER	U37	1
74LS240	OCTAL INVERTER	U67	1
74LS244	OCTAL BUFFER U13,21,29,30,58,68,77,83		8
74LS245	OCTAL BI-DIRECTIONAL	U60,75,76,82	4
74LS373	OCTAL REGISTER	U11,12	2
74S00	QUAD NAND GATE	U51	1
74S08	QUAD AND GATE	U28	1
74S32	QUAD OR GATE	U50	1
74S240	OCTAL INVERTER	U59	1
7438	QUAD NAND GATE OC	U18,65	2
74126	QUAD 3-STATE BUFFER	U42	1
8086-2	16-BIT MICROPROCESSOR	U6	1

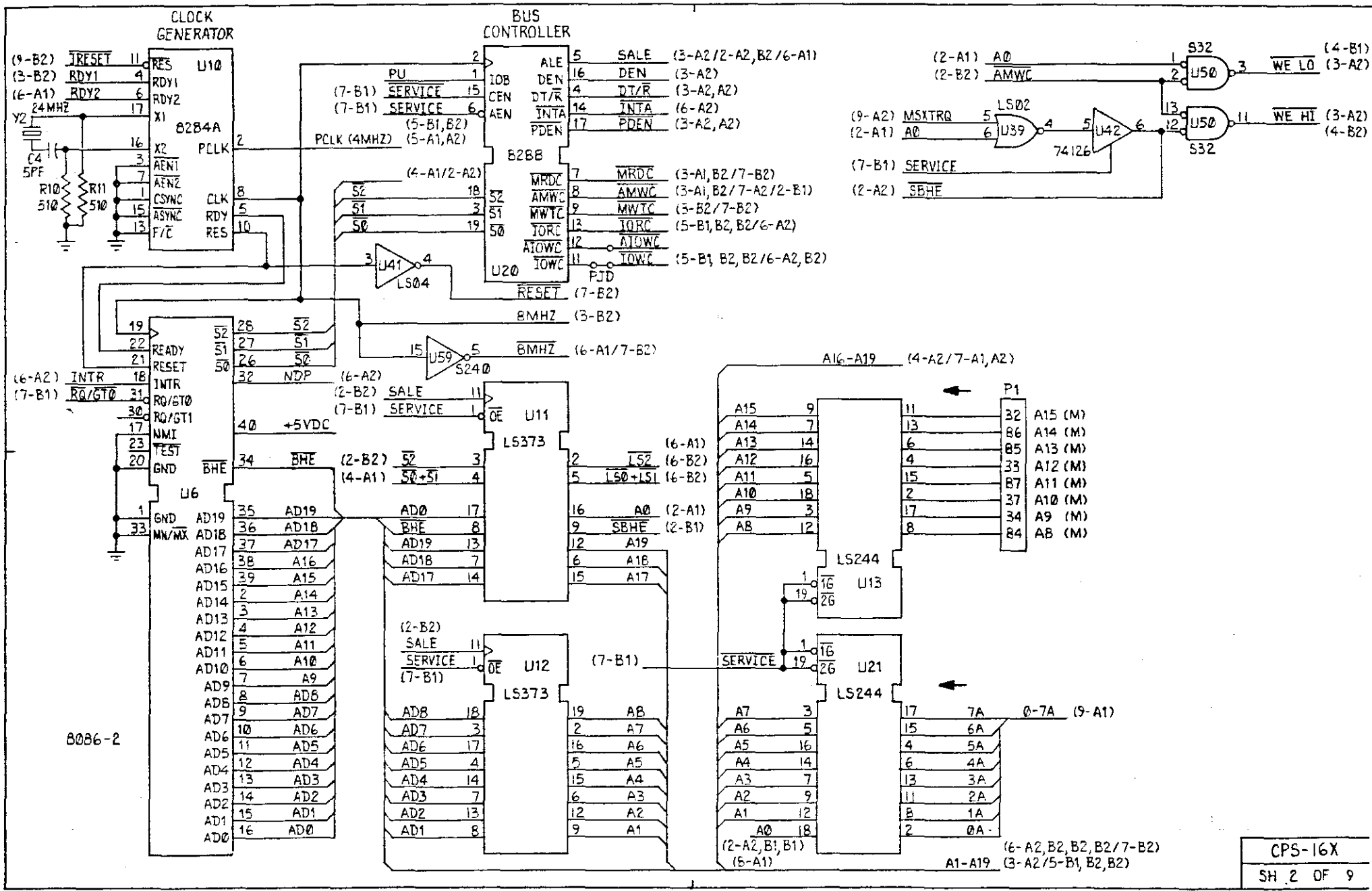
REV	DESCRIPTION	APPR. BY	DATE
A	SCHEMATIC UPDATE	R Tgal	5-18-84
B	ADD R10,R11; CHANGE MASTER REFRESH	R Tgal	1-20-85
C	CORRECT ARTWORK	R Tgal	2-12-85
D	CORRECT ARTWORK	R Tgal	3-15-85

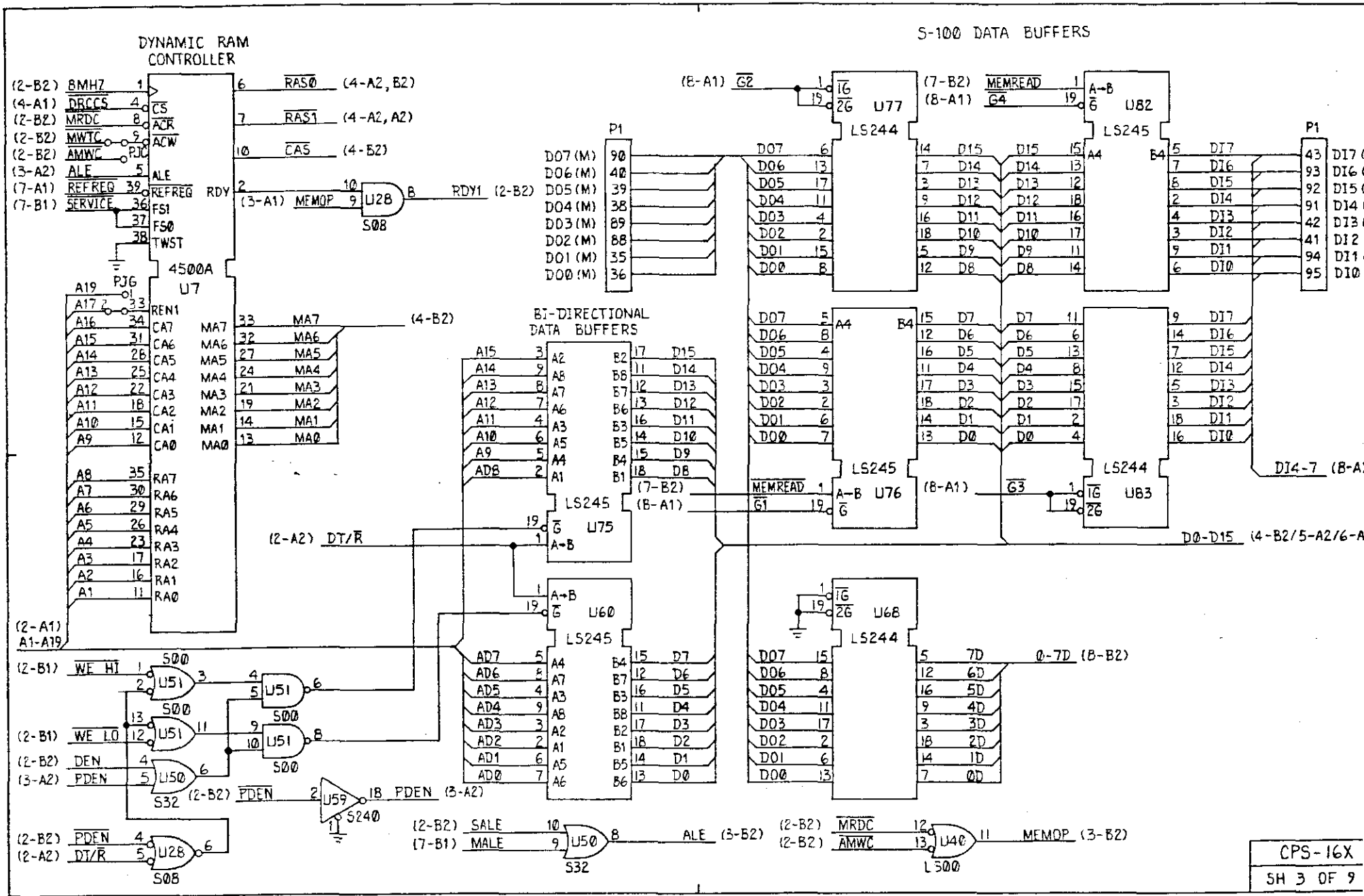


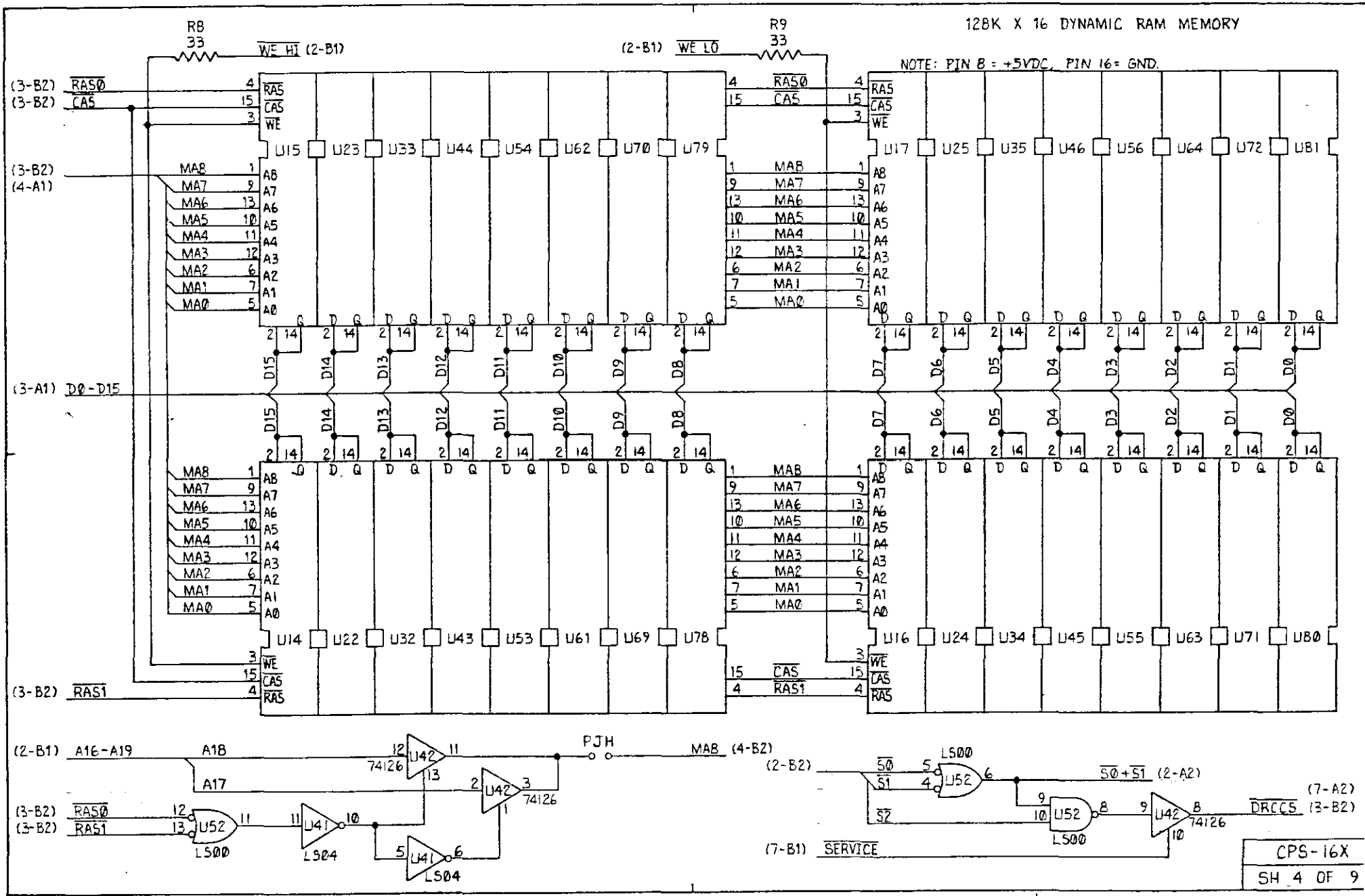
INTERCONTINENTAL MICRO SYSTEMS 16 BIT SLAVE BD. SILKSCREEN

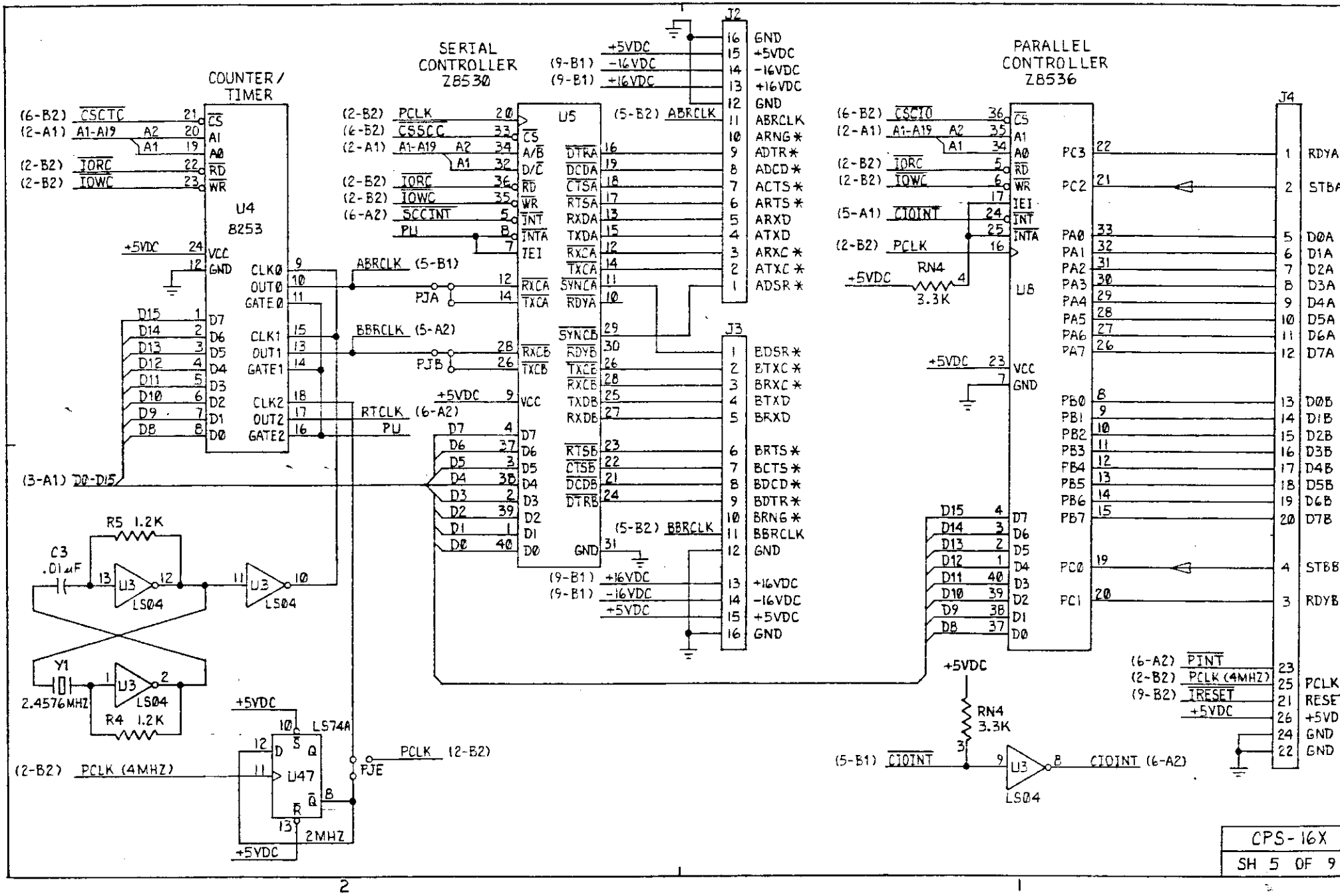
8253	COUNTER/TIMER	U4	1
8259A	INTERRUPT CONTROLLER	U9	1
8284A	CLOCK GENERATOR	U10	1
8288	BUS CONTROLLER	U20	1
8530 (8531)	SERIAL CNTRL SYNC/(ASYNC)	U5	1
8536	PARALLEL INTERFACE CNTRL	U8	1
AM25LS2521DC	8-BIT COMPARATOR	U31	1
AM27S33DC	1K X 4 PROM TS		2
	310-02	U74	
	310-03	U84	
ECG 955M	ONE-SHOT	U1	1
M5K4164S-15	64K X 1 DYNAMIC RAM U14-17,22-25, U32-35,43-46,53-56, U61-64,69-72,78-81		32
TMS4500A-15	DYNAMIC RAM CONTROLLER	U7	1

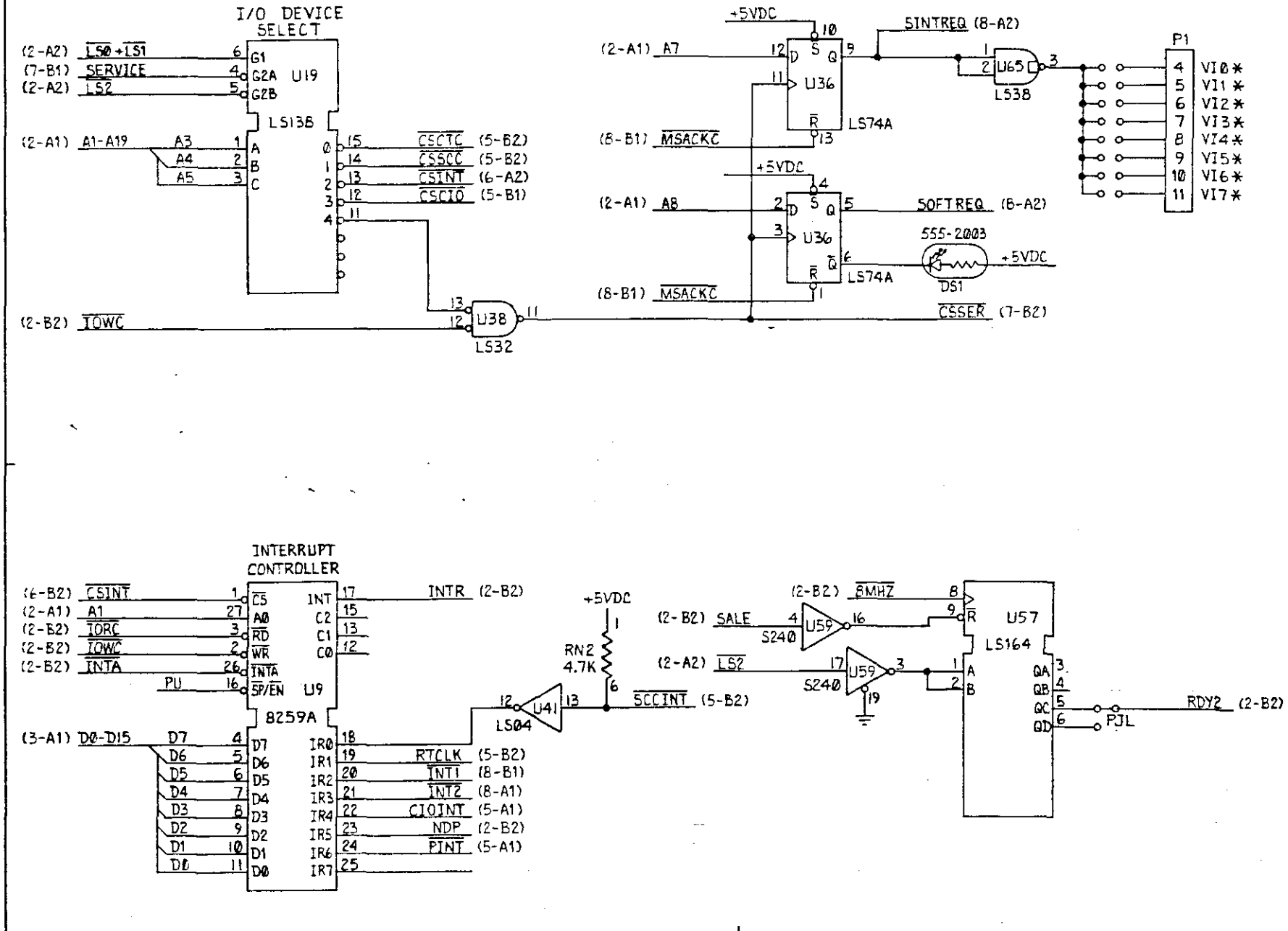
Designed By: R Tgal 5-84	INTERCONTINENTAL MICRO SYSTEMS	
Checked By:	SCHEMATIC/LOGIC DIAGRAM 16-BIT, 256K SLAVE	
Rev: D	CPS-16X	Sheet 1 of 9


CLOCK GENERATOR
BUS CONTROLLER
U10
8284A
U20
8288
U6
8086-2
U11
LS373
U12
LS373
U13
LS244
U21
LS244
U41
LS04
U59
S240
U50
S32
U39
LS02
U42
74126
P1
CPS-16X
SH 2 OF 9


DYNAMIC RAM CONTROLLER
S-100 DATA BUFFERS
BI-DIRECTIONAL DATA BUFFERS
4500A U7
U77 LS244
U82 LS245
U76 LS245
U83 LS244
U75 LS245
U60 LS245
U68 LS244
P1
RAS0 (4-A2,B2)
RAS1 (4-A2,A2)
CAS (4-B2)
MA7 (4-B2)
RDY1 (2-B2)
DT/R
PDEN
ALE (3-B2)
MEMOP (3-B2)
DI4-7 (B-A1)
D0-D15 (4-B2/5-A2/6-A
0-7D (B-B2)
CPS-16X
SH 3 OF 9

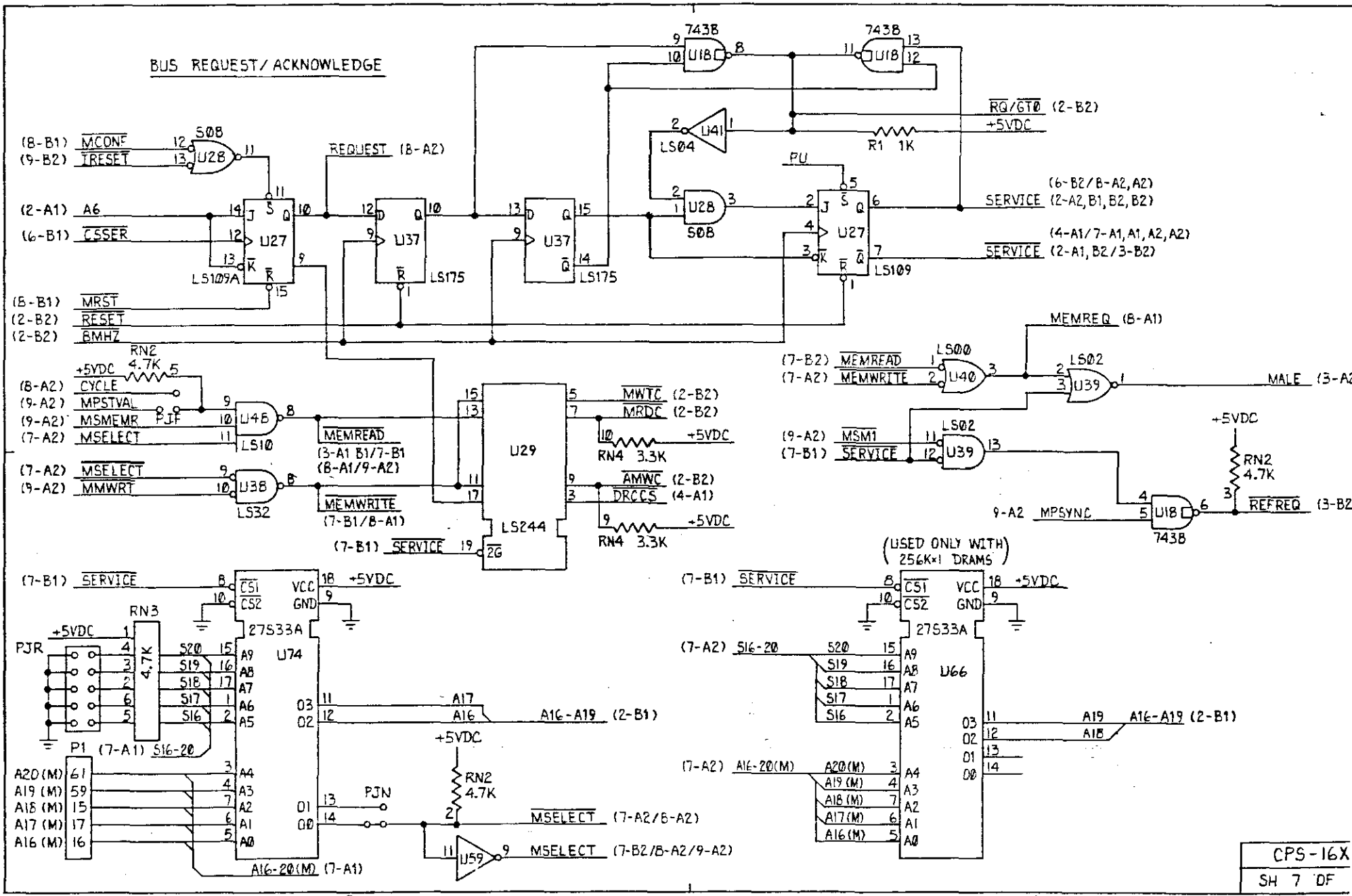

128K X 16 DYNAMIC RAM MEMORY
NOTE: PIN 8 = +5VDC, PIN 16 = GND.
R8
33
R9
33
WE HI (2-B1)
(2-B1) WE LO
(3-B2) RAS0
(3-B2) CAS
(3-B2) RAS1
(3-A1) D0-D15
(3-B2) (4-A1)
MA8
MA7
MA6
MA5
MA4
MA3
MA2
MA1
MA0
U15 U23 U33 U44 U54 U62 U70 U79
U14 U22 U32 U43 U53 U61 U69 U78
U17 U25 U35 U46 U56 U64 U72 U81
U16 U24 U34 U45 U55 U63 U71 U80
(2-B1) A16-A19
A18
A17
74126
PJH
MA8 (4-B2)
LS00
LS04
(2-B2)
S0+S1 (2-A2)
(7-A2)
DRCC5 (3-B2)
(7-B1) SERVICE
CPS-16X
SH 4 OF 9

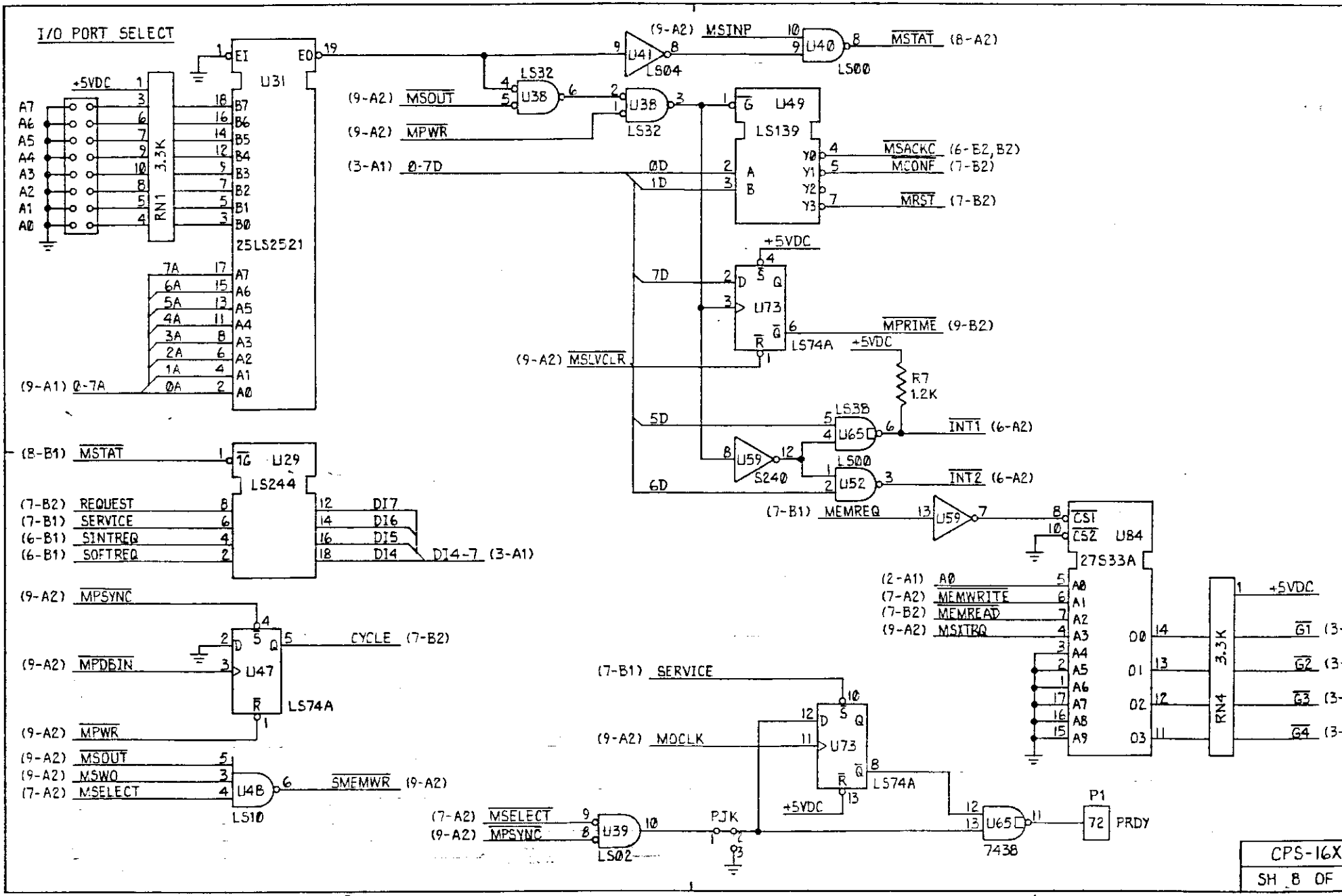

COUNTER / TIMER
U4
8253
SERIAL CONTROLLER Z8530
U5
PARALLEL CONTROLLER Z8536
U8
J2
J3
J4
U3
LS04
U47
LS74A
Y1
2.4576MHZ
R4 1.2K
R5 1.2K
C3 .01uF
RN4 3.3K
2MHZ
CPS-16X
SH 5 OF 9

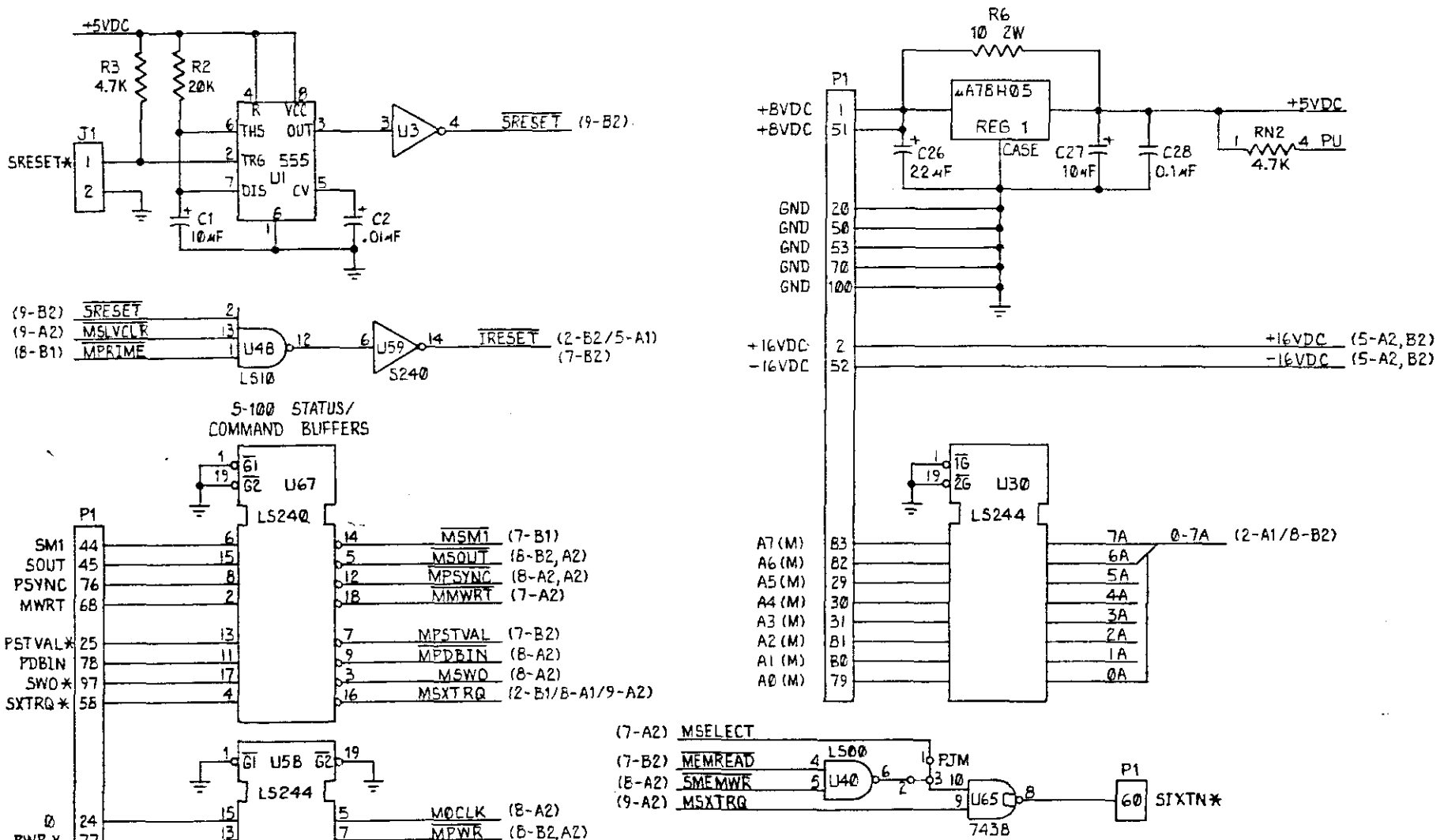


CPS-16X

SH 6 OF 9


BUS REQUEST/ACKNOWLEDGE
(8-B1) MCONF
(9-B2) TRESET
S08
U28
REQUEST (8-A2)
(2-A1) A6
(6-B1) CSSER
U27
LS109A
U37
LS175
U37
LS175
7438
U18
U18
RQ/GT0 (2-B2)
+5VDC
R1 1K
LS04
U41
PU
U28
S08
U27
LS109
(6-B2/8-A2,A2)
SERVICE (2-A2,B1,B2,B2)
(4-A1/7-A1,A1,A2,A2)
SERVICE (2-A1,B2/3-B2)
(8-B1) MRST
(2-B2) RESET
(2-B2) 8MHZ
RN2
4.7K
+5VDC
(8-A2) CYCLE
(9-A2) MPSTVAL
(9-A2) MSMEMR
(7-A2) MSELECT
PJF
U46
LS10
MEMREAD
(3-A1 B1/7-B1
(8-A1/9-A2)
(7-A2) MSELECT
(9-A2) MMWRT
U38
LS32
MEMWRITE
(7-B1/8-A1)
U29
LS244
(7-B1) SERVICE
2G
MWTC (2-B2)
MRDC (2-B2)
+5VDC
RN4 3.3K
AMWC (2-B2)
DRCCS (4-A1)
+5VDC
RN4 3.3K
MEMREQ (8-A1)
(7-B2) MEMREAD
(7-A2) MEMWRITE
LS00
U40
LS02
U39
MALE (3-A2
(9-A2) MSM1
(7-B1) SERVICE
LS02
U39
+5VDC
RN2
4.7K
REFREQ (3-B2
9-A2 MPSYNC
U18
7438
(USED ONLY WITH)
256Kx1 DRAMS
(7-B1) SERVICE
CS1
CS2
VCC
GND
+5VDC
27S33A
U74
RN3
+5VDC
PJR
4.7K
S20
S19
S18
S17
S16
A9
A8
A7
A6
A5
A4
A3
A2
A1
A0
O3
O2
O1
O0
A17
A16
A16-A19 (2-B1)
P1 (7-A1) S16-20
A20(M) 61
A19(M) 59
A18(M) 15
A17(M) 17
A16(M) 16
A16-20(M) (7-A1)
PJN
+5VDC
RN2
4.7K
MSELECT (7-A2/8-A2)
U59
MSELECT (7-B2/8-A2/9-A2)
(7-A2) S16-20
U66
A19
A18
A16-A19 (2-B1)
(7-A2) A16-20(M)
A20(M)
A19(M)
A18(M)
A17(M)
A16(M)
CPS-16X
SH 7 OF


I/O PORT SELECT
U31
25LS2521
RN1 3.3K
+5VDC
A7
A6
A5
A4
A3
A2
A1
A0
(9-A1) 0-7A
(9-A2) MSINP
U41
LS04
U40
LS00
MSTAT (8-A2)
(9-A2) MSOUT
(9-A2) MPWR
LS32
U38
U49
LS139
MSACKC (6-E2,B2)
MCONF (7-B2)
MRST (7-B2)
(3-A1) 0-7D
0D
1D
7D
5D
6D
U73
LS74A
MPRIME (9-B2)
(9-A2) MSLVCLR
R7
1.2K
INT1 (6-A2)
INT2 (6-A2)
LS08
U65
U59
S240
U52
(7-B1) MEMREQ
U84
27S33A
(2-A1) A0
(7-A2) MEMWRITE
(7-B2) MEMREAD
(9-A2) MSXTRQ
RN4 3.3K
+5VDC
G1 (3-
G2 (3-
G3 (3-
G4 (3-
(8-B1) MSTAT
U29
LS244
(7-B2) REQUEST
(7-B1) SERVICE
(6-B1) SINTREQ
(6-B1) SOFTREQ
DI7
DI6
DI5
DI4
DI4-7 (3-A1)
(9-A2) MPSYNC
U47
LS74A
CYCLE (7-B2)
(9-A2) MPDBIN
(9-A2) MPWR
(9-A2) MSOUT
(9-A2) MSWO
(7-A2) MSELECT
U48
LS10
SMEMWR (9-A2)
(7-B1) SERVICE
(9-A2) MOCLK
(7-A2) MSELECT
(9-A2) MPSYNC
U39
LS02
PJK
+5VDC
U65
7438
P1
72
PRDY
CPS-16X
SH 8 OF



CPS-16X
SH 9 OF